PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference MSP617	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/EP03/04346	International filing date *(day/month/year)* 08.04.2003	Priority date *(day/month/year)* 10.04.2002
International Patent Classification (IPC) or both national classification and IPC H05H1/24		
Applicant DOW CORNING IRELAND LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
08.09.2003	09.12.2003
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer de la Cal Heusch, E Telephone No. +49 89 2399-2008

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP03/04346

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-20 as originally filed

Claims, Numbers

1-19 as originally filed

Drawings, Sheets

1-3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-19
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-19
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-19
	No:	Claims	

2. Citations and explanations

   see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

References

Reference is made to the following documents:

D1: US-B1-6 241 858.

D2: US-A- 5399 832, cited in the application (see § 13).

Object

The object of the present invention is to increase the coating rate of powder substrates of known atmospheric plasma coating techniques (see D2).

Prior art

D1 discloses a method for coating a powder substrate by providing a vaporized coating material into a chemical vapour deposition chamber. The powder is contained into a vibrating bed.

D2, which is cited in the application on § 13, discloses a method for powder coating by introducing the powder into an atmospheric plasma apparatus where selected gases decompose so as to deposit onto the introduced powder.

WO 02/35576, published after the priority of the present application, basically discloses the plasma assembly shown in Fig. 2 (see also claims 10-13) of the present application. It is cited in the application on § 37.

WO 02 28548 , published after the priority of the present application and cited in the application (see § 17 and § 27) discloses a method for coating powder substrates via atmospheric plasma treatment with atomised coating material injection (see e.g. abstract and p. 8, l. 4). This document may be conflictive in the European Regional phase in view of Art. 54(3) EPC.

Independent claims

Claim 1.

Solution and assessment

According to claim 1, an atmospheric plasma coating method for powder substrates is disclosed, in which the coating material is introduced in the plasma assembly in form of an atomised liquid or solid.

The here claimed invention is new and inventive over the searched prior art in the sense of Art. 33 PCT, because the following combination of features is not obvious from the available prior art:

a) introducing the powder substrate into an atmospheric plasma reactor.

b) introducing the coating material in the reaction chamber in form of atomised liquid or solid form so as to deposit it onto the powder.

Although in D2, which can be considered closest prior art, coating of powder substrates within an atmospheric plasma reactor is disclosed (feature a), no hint on why to use an atomizer to inject the coating material (feature b) is given. Furthermore, making such a choice is not obvious for the skilled person.

Remarks

1.) In order that the embodiment of Fig. 1 (see also claim 2) falls clearly within the scope of apparatus **claim 9**, the examiner suggests to introduce reference number 4 when referring to the means of introducing the powder into the chamber, reference number 1 for the chamber and number 3 for the atomizer.